In the Claims:

Please amend claims 48, 59, 60 and 63 as follows.

Please cancel claim 53 without prejudice.

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-47 (cancelled)

48. (Currently Amended) A protein having an activity of interest obtained by a method comprising:

a) culturing a gene expression library comprising a pool of expression constructs, each expression construct comprising one ~~cDNA or~~ genomic DNA fragment, wherein the ~~cDNA or~~ genomic DNA fragments in the pool of expression constructs are derived from a plurality of species of donor organisms derived from an environmental sample~~, and wherein the cDNA or genomic DNA fragments are each operably associated with one or more regulatory regions that drives expression of genes encoded by the cDNA or genomic DNA fragments in an appropriate host organism~~; and

b) screening the expression constructs to identify one or more expression construct containing a vector that produces a protein activity of interest;

c) removing the ~~cDNA or~~ genomic DNA fragments from the one or more expression construct identified in b); and

d) expressing the DNA encoding the protein of interest, thereby obtaining the protein having an activity of interest.

49. (Previously Presented) The protein of claim 48, wherein the activity is an enzymatic activity.

50. (Cancelled)

51. (Cancelled)

52. (Previously Presented) The protein of claim 48, wherein the donor organisms are microorganisms.

53. (Canceled)

54. (Previously Presented) The protein of claim 48, wherein the microorganisms are a mixed population of uncultured organisms.

55. (Previously Presented) The protein of claim 48, wherein the DNA fragment comprises one or more operons, or portions thereof.

56. (Previously Presented) The protein of claim 55, wherein the operon or portions thereof encodes a complete or partial metabolic pathway.

57. (Previously Presented) The protein of claim 48, wherein the DNA comprises a gene cluster.

58. (Previously Presented) The protein of claim 57, wherein the gene cluster encodes one or more polyketide synthases.

59. (Currently Amended) The protein of claim 48, wherein the method further comprises prior to the step of recovering a fraction of the ~~cDNA or~~ genomic DNA fragments having a desired characteristic.

60. (Currently Amended) The protein of claim 48 which comprises the step of amplifying the ~~cDNA or~~ genomic DNA fragments.

61. (Previously Presented) The protein of claim 60 wherein the step of amplifying the DNA precedes the identifying step.

62. (Previously Presented) The protein of claim 61 wherein the identifying step precedes the amplifying step.

63. (Currently Amended) The protein of claim 48 which comprises both the steps of (i) amplifying the ~~cDNA or~~ genomic DNA fragments and (ii) recovering a fraction of the ~~cDNA or~~ genomic DNA fragments having a desired characteristic.